

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number  
**WO 2004/039352 A3**

(51) International Patent Classification<sup>7</sup>: **A61K 31/4178**,  
C07D 403/10

(21) International Application Number:  
PCT/IB2003/004873

(22) International Filing Date: 31 October 2003 (31.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
1095/Del/2002 31 October 2002 (31.10.2002) IN

(71) Applicant (for all designated States except US): **RAN-  
BAXY LABORATORIES LIMITED** [IN/IN]; 19, Nehru  
Place, New Delhi 110 019, Delhi (IN).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KUMAR, Yatendra**  
[IN/IN]; U-26/5, Phase - III, DLF Qutab Enclave, Gur-  
gaon 122 002, Haryana (IN). **SHARMA, Tarun, Kant**  
[IN/IN]; c/o Shri Parshu Ram Sharma, Kanchan Nilyam,  
Shiv Puri, Muzaffarpur 842 001, Bihar (IN). **BOSE, Pros-  
enjit** [IN/IN]; House No. A-92, First Floor, South City - II,  
Gurgaon 122 001, Haryana (IN).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,  
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,  
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:  
2 September 2004

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: AMORPHOUS FORM OF LOSARTAN POTASSIUM

(57) Abstract: This invention relates to an amorphous form of losartan potassium. The invention also relates to processes for prepar-  
ing amorphous losartan potassium and pharmaceutical compositions that include the amorphous losartan potassium.

WO 2004/039352 A3

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 03/04873

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61K31/4178 C07D403/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, CHEM ABS Data, BIOSIS, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/048135 A (DOLITZKY BEN ZION ; NISNEVICH GENNADY (IL); TEVA PHARMA (IL); KAFTANOV) 12 June 2003 (2003-06-12) the whole document	1-21
X	WO 02/094816 A (AUROBINDO PHARMA LTD) 28 November 2002 (2002-11-28) the whole document	1-21
X	EP 0 324 377 A (DU PONT) 19 July 1989 (1989-07-19) the whole document	1-21
X	WO 01/81336 A (FARKAS JENONE ; FISCHER JANOS (HU); BALLO ILDIKO (HU); CZIBULA LASZLO) 1 November 2001 (2001-11-01) the whole document	1-21
	----- -/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

8 June 2004

Date of mailing of the international search report

16/06/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5618 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Giménez Miralles, J

# INTERNATIONAL SEARCH REPORT

national Application No  
PCT/IB 03/04873

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 608 075 A (CAMPBELL JR GORDON C ET AL) 4 March 1997 (1997-03-04) cited in the application the whole document	1-21
X	US 5 138 069 A (CARINI DAVID J ET AL) 11 August 1992 (1992-08-11) cited in the application the whole document	1-21
Y	US 5 859 258 A (BREEN PATRICK ET AL) 12 January 1999 (1999-01-12) the whole document	1-21
Y	WO 00/04862 A (SMITHKLINE BEECHAM CORP ; GUDIPATI MANGA R (US); VENKATESH GOPADI (US)) 3 February 2000 (2000-02-03) the whole document	1-21

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 03/04873

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03048135	A	12-06-2003	WO 03048135 A1 US 2004006237 A1	12-06-2003 08-01-2004
WO 02094816	A	28-11-2002	BG 107478 A EP 1294712 A1 WO 02094816 A1 SI 21236 A SK 722003 A3	30-01-2004 26-03-2003 28-11-2002 31-12-2003 02-12-2003
EP 0324377	A	19-07-1989	AT 151755 T AT 164520 T AU 2777189 A CA 1338238 C CY 2187 A DE 68927965 D1 DE 68927965 T2 DE 68928631 D1 DE 68928631 T2 DK 5189 A EP 0324377 A2 EP 0733366 A2 ES 2100150 T3 ES 2117463 T3 FI 890070 A ,B, GR 3024053 T3 HU 9500636 A3 IE 960772 L JP 3501020 T JP 7025738 B KR 9107213 B1 LU 90266 A9 MD 28 B1 NO 890075 A ,B, NZ 227539 A PT 89401 A ,B SU 1814646 A3 RU 2017733 C1 WO 8906233 A1 US 5138069 A US 5128355 A US 5153197 A US 5155118 A US 5210079 A ZA 8900127 A HU 64038 A2 LV 5713 A4 US 5354867 A	15-05-1997 15-04-1998 13-07-1989 09-04-1996 08-11-2002 22-05-1997 24-07-1997 07-05-1998 22-10-1998 08-07-1989 19-07-1989 25-09-1996 16-06-1997 01-08-1998 08-07-1989 31-10-1997 28-11-1995 07-07-1989 07-03-1991 22-03-1995 20-09-1991 01-10-1998 30-06-1994 10-07-1989 26-04-1991 08-02-1990 07-05-1993 15-08-1994 13-07-1989 11-08-1992 07-07-1992 06-10-1992 13-10-1992 11-05-1993 26-09-1990 29-11-1993 20-08-1995 11-10-1994
WO 0181336	A	01-11-2001	HU 0001618 A2 AT 259366 T AU 5499801 A BG 107031 A DE 60102008 D1 EE 200200460 A EP 1274702 A1 WO 0181336 A1 JP 2003531203 T SK 12892002 A3	28-11-2002 15-02-2004 07-11-2001 29-08-2003 18-03-2004 15-12-2003 15-01-2003 01-11-2001 21-10-2003 03-12-2002

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 03/04873

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0181336	A	US 2003078435 A1	24-04-2003
US 5608075	A 04-03-1997	AU 685898 B2 AU 1405895 A CA 2179067 A1 EP 0736021 A1 JP 9507075 T WO 9517396 A1	29-01-1998 10-07-1995 29-06-1995 09-10-1996 15-07-1997 29-06-1995
US 5138069	A 11-08-1992	AT 113276 T AU 599396 B2 AU 7559687 A CA 1334092 C CY 1855 A DE 3750687 D1 DE 3750687 T2 DK 359687 A EP 0253310 A2 ES 2063734 T3 FI 873071 A ,B, HK 55495 A HU 45976 A2 HU 218461 B IE 69984 B1 IL 83153 A KR 9005020 B1 KR 9005045 B1 LU 88662 A9 LV 5486 A3 NO 872863 A ,B, PT 85312 A ,B SU 1694062 A3 US 5128355 A US 5153197 A US 5155118 A AT 151755 T AT 164520 T AU 2777189 A CA 1338238 C CY 2187 A DE 68927965 D1 DE 68927965 T2 DE 68928631 D1 DE 68928631 T2 DK 5189 A EP 0324377 A2 EP 0733366 A2 ES 2100150 T3 ES 2117463 T3 FI 890070 A ,B, GR 3024053 T3 HU 9500636 A3 IE 960772 L JP 3501020 T JP 7025738 B KR 9107213 B1 LU 90266 A9 MD 28 B1	15-11-1994 19-07-1990 21-01-1988 24-01-1995 05-04-1996 01-12-1994 23-02-1995 12-01-1988 20-01-1988 16-01-1995 12-01-1988 21-04-1995 28-09-1988 28-08-2000 16-10-1996 15-12-1991 18-07-1990 18-07-1990 01-12-1995 10-03-1994 12-01-1988 01-08-1987 23-11-1991 07-07-1992 06-10-1992 13-10-1992 15-05-1997 15-04-1998 13-07-1989 09-04-1996 08-11-2002 22-05-1997 24-07-1997 07-05-1998 22-10-1998 08-07-1989 19-07-1989 25-09-1996 16-06-1997 01-08-1998 08-07-1989 31-10-1997 28-11-1995 07-07-1989 07-03-1991 22-03-1995 20-09-1991 01-10-1998 30-06-1994

# INTERNATIONAL SEARCH REPORT

national Application No  
PCT/IB 03/04873

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5859258	A	12-01-1999	AT 214388 T	15-03-2002
			AU 5089898 A	22-05-1998
			BR 9712390 A	31-08-1999
			CN 1241186 A , B	12-01-2000
			CZ 9901515 A3	13-10-1999
			DE 69711068 D1	18-04-2002
			DE 69711068 T2	12-09-2002
			DK 937068 T3	21-05-2002
			EA 1046 B1	28-08-2000
			EP 0937068 A1	25-08-1999
			ES 2173433 T3	16-10-2002
			HR 970565 A1	31-08-1998
			JP 2000504343 T	11-04-2000
			JP 3249827 B2	21-01-2002
			PT 937068 T	31-07-2002
			SK 57099 A3	14-02-2000
			TW 411338 B	11-11-2000
			WO 9818787 A1	07-05-1998
WO 0004862	A	03-02-2000	AU 763309 B2	17-07-2003
			AU 5080799 A	14-02-2000
			BR 9912145 A	25-09-2001
			CA 2338256 A1	03-02-2000
			CN 1315853 T	03-10-2001
			EP 1098634 A2	16-05-2001
			HU 0103000 A2	29-05-2002
			JP 2002521315 T	16-07-2002
			NO 20010283 A	19-01-2001
			NZ 509378 A	29-04-2003
			PL 346863 A1	11-03-2002
			TR 200100172 T2	21-05-2001
			WO 0004862 A2	03-02-2000
			US 6517871 B1	11-02-2003
			ZA 200100473 A	23-09-2002